AMENDMENTS

Please amend the subject application as follows:

IN THE CLAIMS:

Please amend the claims as follows:

What is claimed is:

1. (Currently amended) ~~Use of~~ A method of using a ligand for fibrinogen and/or fibrin for producing an agent comprising an adsorber column of claim 13 for the in vitro treatment and/or prophylaxis of microcirculatory disorders and/or for influencing the rheology of a mammal.

2. (Currently amended) ~~Use according to claim 1, characterized in that the ligand is a peptide preferably having 3 to 10 amino acids~~ A method of using a ligand for fibrinogen and/or fibrin for producing an agent for in vitro treatment and/or prophylaxis of microcirculatory disorders and/or for influencing rheology of a mammal, comprising:

(a) connecting a mammal's microcirculatory system via a circuit to the adsorber column of claim 13;

(b) passing the mammal's whole blood or plasma in vitro over the adsorber column;

(c) reducing the level of fibrinogen and/or fibrin in the mammal's whole blood or plasma by binding of the fibrinogen and/or fibrin to the adsorber column; and

(d) returning the whole blood or plasma with reduced level of fibrinogen and/or fibrin to the mammal's microcirculatory system.

3. (Currently amended) ~~Use~~ The method according to claim 2, ~~characterized in that~~ wherein the peptide ~~contains~~ consists of the ~~following~~ amino acid sequence~~:~~ of SEQ ID NO:1 and wherein the X of SEQ ID NO:1 is a polylysine, an ε-amino caproic acid

spacer or a spacer molecule with six C-atoms.

~~Gly-Pro-Arg-Pro-x~~

4. (Currently amended) ~~Use~~ The method according to claim 3, ~~characterized in that~~ wherein the peptide ~~has~~ consists of the ~~following~~ amino acid sequence~~:~~ of SEQ ID NO:2.

~~Gly-Pro-Arg-Pro-Lys~~

5. (Withdrawn) Use according to claim 1, characterized in that the ligand is an antibody.

6. (Withdrawn) Use according to claim 1, characterized in that the mammal is a human being.

7. (Withdrawn) Use according to claim 1, characterized in that the ligand is selected from polyclonal and monoclonal anti-fibrinogen antibodies and anti-fibrin antibodies.

8. (Withdrawn) Use according to claim 1, characterized in that the ligand in the agent is bound to a solid matrix.

9. (Withdrawn) Use according to claim 8, characterized in that the matrix is selected from glass, carbohydrates, polymethacrylates and polyamides.

10. (Currently amended) ~~Use~~ The method according to claim ~~9~~ 2, ~~characterized in that~~ wherein the matrix is ~~Sepharose~~ a carbohydrate matrix.

11. (Currently amended) ~~Use~~ The method according to claim ~~8~~ 2, ~~characterized in that~~ wherein the matrix consists of beads, fibers and/or a membrane.

12. (Currently amended) ~~Use~~ The method according to claim ~~8~~ 2, ~~characterized in that~~ wherein the microcirculatory disorder appears in connection with diabetes, retinopathy, polyneuropathy, apoplexy, sudden deafness, sepsis, arterial occlusive diseases and/or impaired kidney function.

13. (Currently amended) An adsorber column for influencing the microcirculation of a mammal, said adsorber column containing a matrix and a ligand,

wherein said matrix comprises a material selected from glass, carbohydrates, and polyamides;

wherein said ligand is a peptide consisting of the amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, or SEQ ID NO:8, and wherein the X of SEQ ID NO:1 and SEQ ID NO:3 is a polylysine, an ε-amino caproic acid spacer or a spacer molecule with six C-atoms;

wherein said ligand has a specificity for fibrin and/or fibrinogen; and

wherein said adsorber column is useful individually or as one of a pair or more of adsorber columns for influencing the microcirculation of a mammal.

14. (Currently amended) The ~~A~~adsorber column according to claim 13, wherein ~~the ligand is a peptide containing the amino acid sequence: Gly-Pro-Arg-Pro-x wherein x can be any desired amino acid or spacer, or wherein~~ the ligand is a peptide ~~having~~ consisting of the amino acid sequence ~~Gly-Pro-Arg-Pro-Lys~~ of SEQ ID NO:1 or SEQ ID NO:2, and wherein the X of SEQ ID NO:1 is a polylysine, an ε-amino caproic acid spacer or a spacer molecule with six C-atoms.

15. (Currently Amended) The ~~A~~adsorber column according to claim 13, wherein the matrix is ~~Sepharose~~ a carbohydrate matrix.

16. (Currently amended) A ~~M~~method for influencing the microcirculation of a

mammal, wherein blood of the mammal is passed *in vitro* over the column according to claim 13, the method comprising:

(a) connecting a mammal's microcirculatory system via a circuit to the adsorber column of claim 13;

(b) passing the mammal's whole blood or plasma *in vitro* over the adsorber column;

(c) reducing the level of fibrinogen and/or fibrin in the mammal's whole blood or plasma by binding of the fibrinogen and/or fibrin to the adsorber column of claim 13; and

(d) returning the whole blood or plasma with reduced level of fibrinogen and/or fibrin to the mammal's microcirculatory system.

17. (Currently amended) The ~~M~~method according to claim 16, ~~characterized in that~~ wherein the method ~~it~~ is carried out as an apheresis method for plasma or whole blood.

18. (Withdrawn) Pharmaceutical compositions containing a ligand for fibrinogen and/or fibrin, wherein the ligand is a peptide having 3 to 10 amino acids.

Please add the following new claims:

19. (New) The method according to claim 2, wherein at least two adsorber columns are connected to the circuit.

20. (New) The method according to claim 19, wherein the at least two adsorber columns are regenerable.

21. (New) The method according to claim 16, wherein at least two adsorber columns are connected to the circuit.

22. (New) The method according to claim 21, wherein the at least two adsorber columns are regenerable.

23. (New) A system for influencing rheology or microcirculation in mammals, wherein the system comprises at least two of the adsorber columns of claim 13 connected in a circuit.

24. (New) The system of claim 23, wherein the at least two adsorber columns are regenerable.

25. (New) The system of claim 24, wherein the system is used for apheresis of whole blood or plasma.